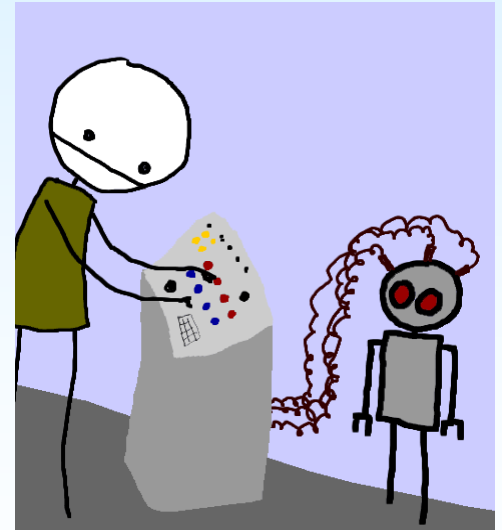


# The NPC's eLearning tool - NPCi

Jonathan Underhill  
Head of Evidence-Based Therapeutics  
National Prescribing Centre  
[www.npci.org.uk](http://www.npci.org.uk)  
[Jonathan.underhill@npc.nhs.uk](mailto:Jonathan.underhill@npc.nhs.uk)



# Background and aim

- NPC provides support around therapeutics and medicines management for healthcare professionals in England:
  - Face to face education via network of trainers
  - Publications
  - Good practice guides
- Issues:
  - Limited audience (~2000 people/year)
  - Problems with GRIP:
    - o Information Mastery
    - o Clinical decision making
    - o Explaining risks and benefits to patients

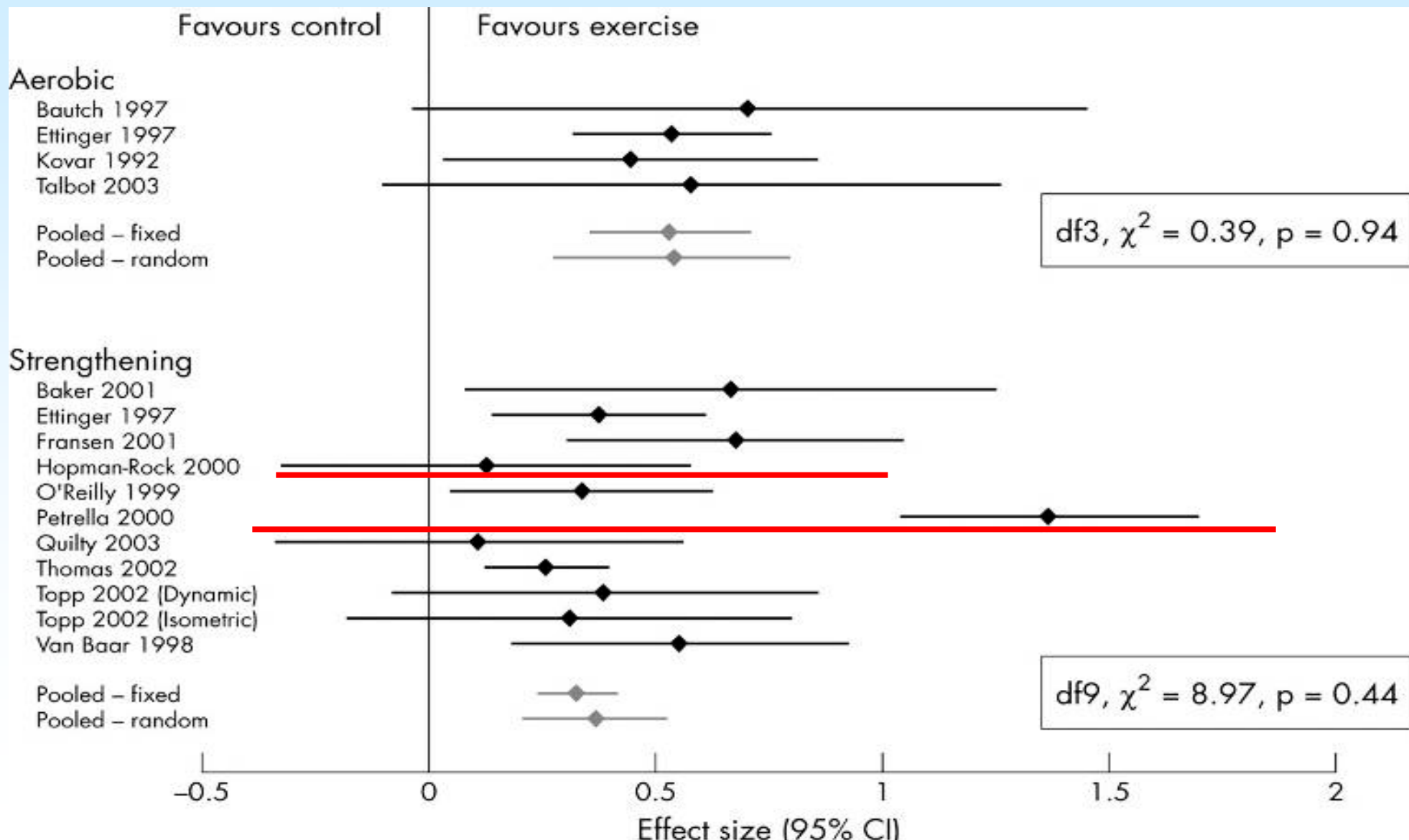


# Information Management



# Effect of Exercise on Pain in Knee OA

Roddy E, et al. Ann Rheum Dis 2005; 64: 544-8



# How can we keep up?

Sackett D et al BMJ 1996;312:71-72

“The difficulties that **clinicians** face in keeping abreast of all the medical advances reported in primary journals are obvious from a comparison of the time required for reading

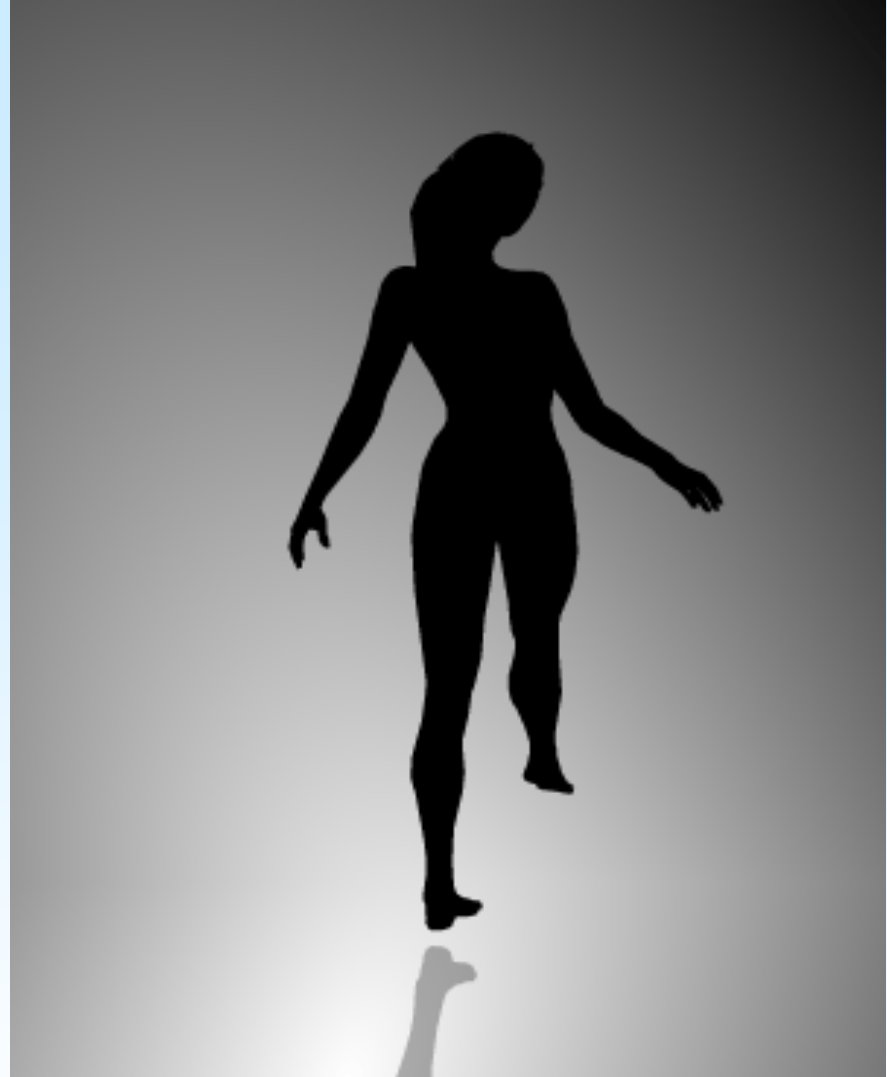
- for general medicine, enough to examine 19 articles per day, 365 days per year

with the time available

- well **under an hour a week** by British medical consultants, even on self reports.”

# Cognitive Psychology

How do we make  
decisions?





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# Humans make decisions by.....

Small number of variables

+

Allocate value to those variables

+

Time frame

=

DECISION

- Brief reading
- Talking to other people



NHS



# How many people access the systematic reviews???

**SAE International** Login / MySAE | Sign Up!  
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Automobile Aerospace Commercial Vehicle Motorsports

### Automobile

**YAZAKI**  
Ground Vehicle Events  
26th Annual Brake Colloquium & Exhibition  
October 12-15, 2008  
Grand Hyatt, San Antonio, Texas, USA  
More Events

Education and Training  
Fundamentals of Steering Systems Seminar  
October 27-28, 2008  
More Education and Training

Convergence® 2008  
October 20-22, 2008  
Detroit, Michigan, USA

**automotive engineering**  
Understanding frontal and side-impact safety ratings  
How safe is that new (or used) vehicle? While you might think the answer should be straightforward, experts typically advocate reviewing a range of test results. But which test results give the best information?  
Nissan enters supercar territory  
The company's GT-R supercar is a treasure trove of

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Available on-line! Fundamentals of

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automotive@tesatape.com  
www.tesatape.com

**Yazaki's Quality is**

# How is knowledge managed in primary care?

Gabbay and le May BMJ 2004; 329: 1013 – 6.

- Not once was a guideline read
- Expert computer systems rarely used (never in real time)
- Shortcuts to evidence
  - free magazines
  - network of trusted colleagues (rarely if ever questioned)
  - Pharma reps – considerable scepticism (but not without influence)
  - Pharmaceutical adviser – highly trusted source.

“Clinicians rarely accessed, appraised, and used explicit evidence directly from research or other formal sources; rare exceptions were where they might consult such sources after dealing with a case that had particularly challenged them.”

- Information Mastery requires two different approaches to managing information:
  - **Foraging** - a method of being **alerted** to new **relevant, valid** information when it is published
  - **Hunting** - a method of **finding** information when it is needed
- We would add a third:-
  - **Hot-synching** – clinicians rapidly checking once or, at the most, twice a year that their key approaches for the management of conditions they see commonly still match the best evidence

# Pre-digested sources of evidence from trusted sources:

Public-sector ethos

Published methodology of how produced

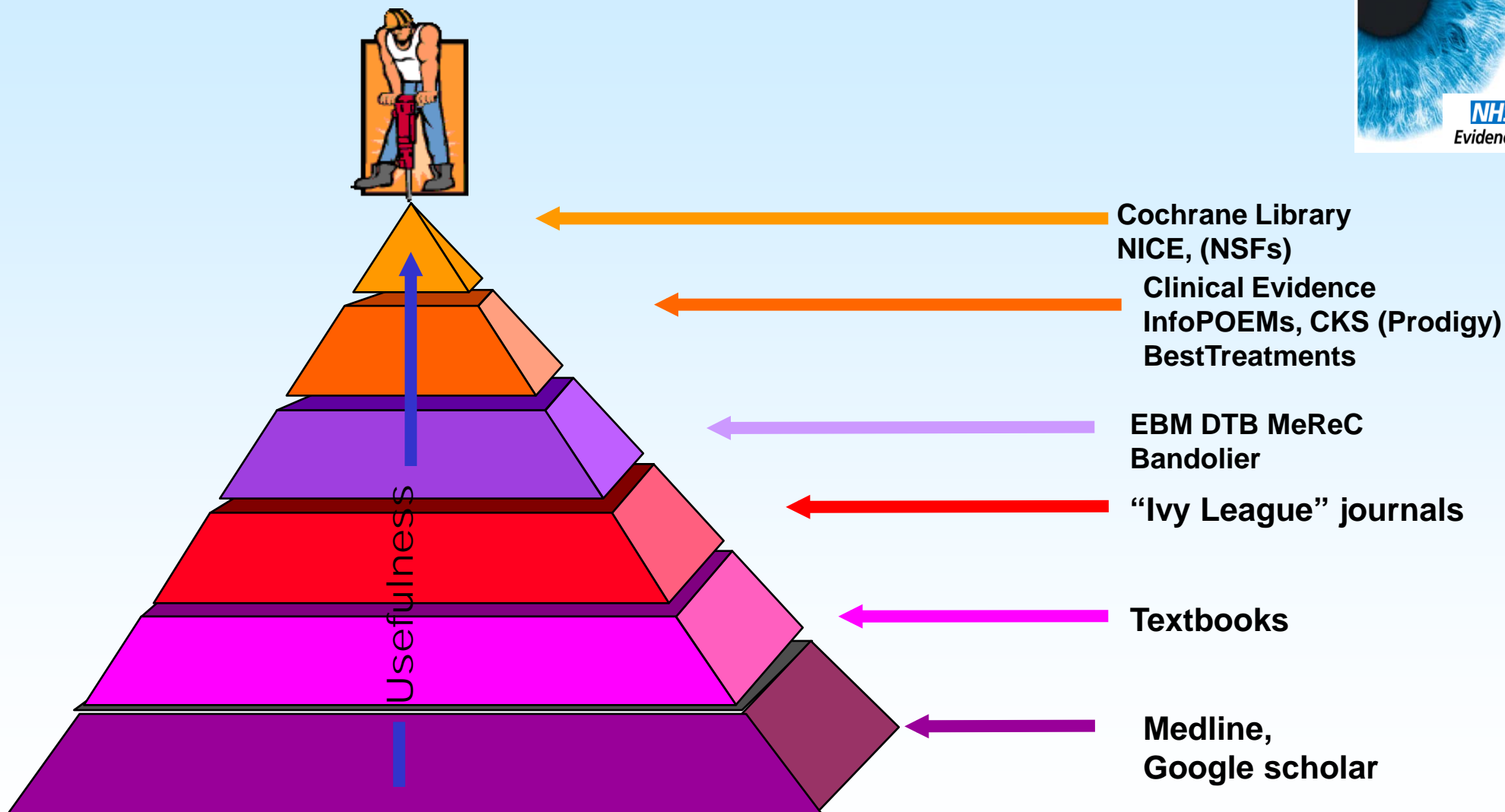
Translation of evidence into practice

Context of the rest of the evidence



# Finding the 'best answer', first time

Slawson DC and Shaughnessy AF





# Methods, results, limitations

- eLearning theory (Gilly Salmon et al)
- Design based on these principles:
  - **Foraging:**
    - o Summaries in the context of the rest of the evidence (*blogs*)
    - o eCAB
  - **Hot synching**
    - o What are the important changes since I last updated my brain?
    - o NPCi floors
  - **Hunting:**
    - o Much more difficult (NHS Evidence)
- Bite sized chunks
- Information, education, entertainment!



[www.npci.org.uk](http://www.npci.org.uk)

# Explaining risks and benefits to patients

# EFFECTS OF CLOPIDOGREL IN ADDITION TO ASPIRIN IN PATIENTS WITH ACUTE CORONARY SYNDROMES WITHOUT ST-SEGMENT ELEVATION

THE CLOPIDOGREL IN UNSTABLE ANGINA TO PREVENT RECURRENT EVENTS TRIAL INVESTIGATORS\*

The primary outcome – a composite of death from CV causes, nonfatal MI or stroke – occurred in 9.3% of the patients in the clopidogrel group and 11.4% of the patients in the placebo group (RR 0.80, 95% CI 0.72 to 0.90;  $P < 0.001$ )

For the first primary outcome, what was the:-

1. Absolute risk reduction (ARR)
2. Relative risk reduction (RRR)
3. Number needed to treat (NNT)

How would you explain these benefits to a patient?

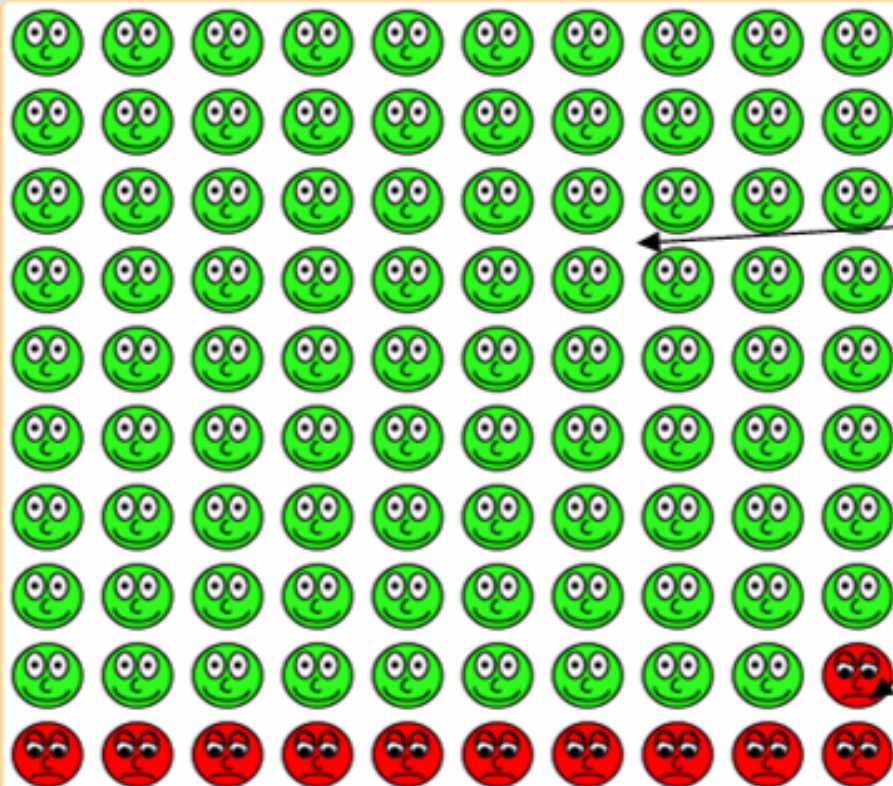
### Cardiovascular death, MI or stroke prevented by aspirin alone

No Treatment

CER: 11%

#### Key

-  Good Outcome
-  Bad Outcome



These 89 people with **green** smiley faces do **not** have a cardiovascular event whilst taking aspirin

These 11 people with **red** sad faces **do** have a cardiovascular event whilst taking aspirin

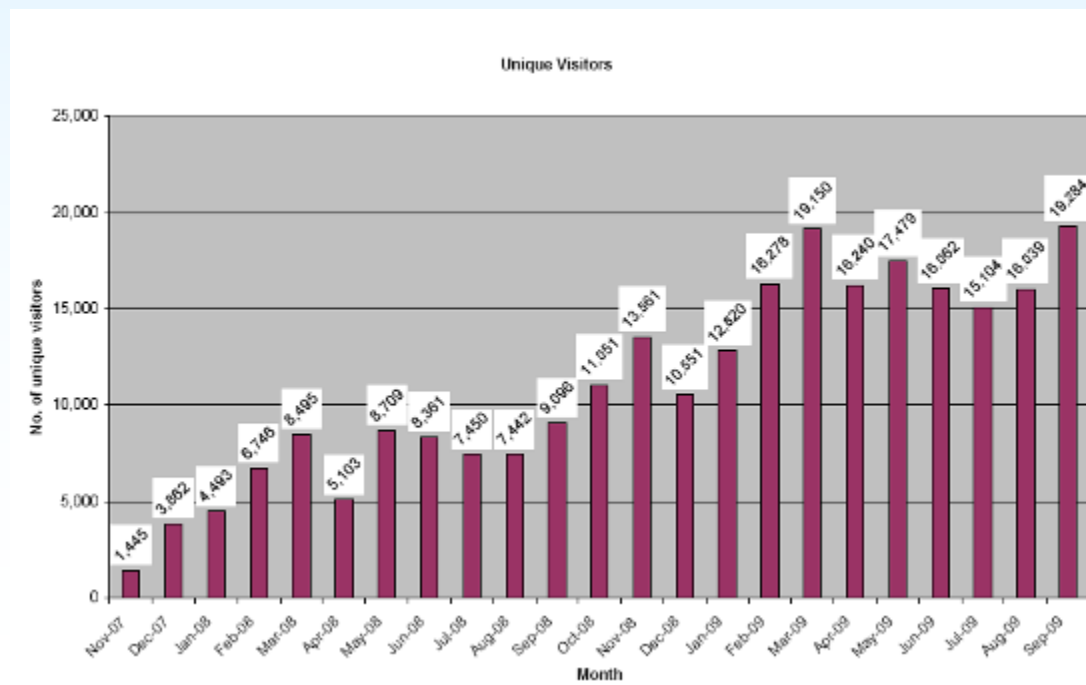
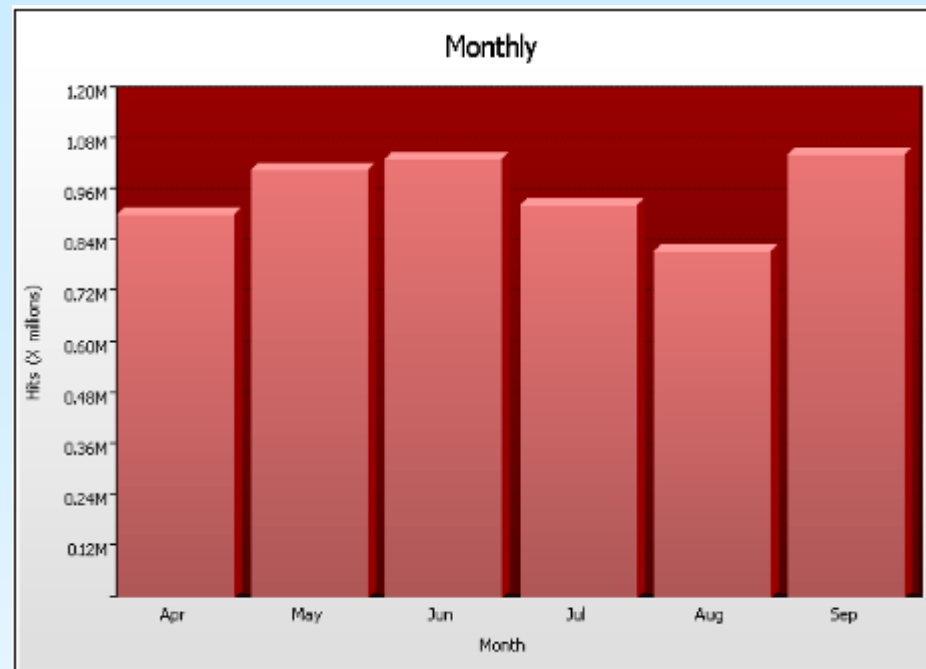
[www.nntonline.net](http://www.nntonline.net)





# NPCi User stats

- ~ 1million hits per month
- ~ 20k unique visitors
- Blogs are most popular hit
  - ~1000 hits/day
- Patient decision aids also very popular



# Conclusions and future developments

- Individualised CPD records
- Improving some of the functionality
- Discussion forums needs more involvement (eMentoring?)
- NPCi is here and we would love your feedback
- The EBM community is excellent at teaching critical appraisal skills, but.....
  - How do clinicians use these in practice?
  - Focus on using and understanding the trusted sources?
  - Translating the evidence into potential actions for clinicians
  - Explaining the results to others (patients)
  - Understanding clinical decision making
  - Working *with* everyday human behaviour



“Knowledge is knowing a tomato is a fruit;  
“Wisdom is not putting tomatoes in a fruit salad”